In the Specification:

On pages 20-21:

Detailed Description of Shearing Chamber 60

A shearing <u>station or </u>chamber 60 is illustrated in FIG. 6A. I especially recommend this method for semi-automatic, and automated units. With this method, shearing chamber 60 has essentially the same cross-sectional profile as ramming chamber *50.* Shearing chamber 60 is rigidly attached to the end of ramming chamber 50 and held in near perfect alignment to each other. Thus, as a block 40 exits chamber 50, it immediately enters into shearing chamber 60. Chamber 60 is roughly 8"-12" long and open-ended just like chamber 50. I like to remove a few hundredths of an inch from the inside surface of chamber 60 to reduce frictional loading. This allows block 40 to progress through chamber 60 and continue on down a support structure 70, while encountering very little resistance. The shearing chamber 60 is held in rigid alignment to ramming chamber 50 by a sliding mechanism. See FIG. 6B where arc-weld locations are indicated by the darkest skipped lines. Parts of a heavy steel support plate 61, are welded to the sides of shearing chamber 60 as indicated. The other end of plate 61 is welded only to bar-stock 62. Heavy channel structure 63 is welded to the sides of ramming chamber 50. This allows bar-stock 62, which moves freely within channel 63, to fit flat against ramming chamber 50. This arrangement keeps chamber 60 tight against the exit end of chamber 50 but allows chamber 60 to move a short distance in only one plane or axis. This distance <u>is less than the height or transverse dimension of chamber 50 and </u>need not exceed 1/2" to fracture or split the largest CEB block 40 cleanly along this plane of movement. A vertical movement is preferred so that chamber 60 is forced up to fracture the block, then back down (gravity assisted) to its original position; which, is again in near perfect alignment with chamber 50. Movement to chamber 60 is provided by a lever/fulcrum device<u>, which moves shearing chamber 60 up then back down into alignment with compression chamber 50</u>. Lever 68 attaches to fulcrum 64, which is supported by a couple of pillow block bearings 65. Bearings 65 are attached by a series of bolts 66 into the bottom of chamber SO. Lever 68 forces a cylindrical roller 67 into contact with the bottom of chamber 60 when a low profile hydraulic cylinder I OA (part of an actuator) is activated. Lever 68 transfers

energy to cylindrical roller 67 forcing shearing chamber 60 upwards. This force fractures or breaks block 40 cleanly along the points of contact between ramming chamber 50 and shearing chamber 60. In the most preferred embodiment, an electronic measuring device (MD) is preset to a desired block length and activates a solenoid valve (MV) when the desired length is obtained. Once activated, the solenoid valve (HV) completes the entire shearing cycle automatically. Since this action requires only milliseconds to complete there is no need to stop the compaction cycle of the unit; thereby, increasing the production efficiency of the compaction unit. In fully automated systems equipped with a microprocessor (MP), the desired lengths can be pre-programmed into the microprocessor (MP) or changed at will by manual input or by radio input (RR) for complete control of the entire production schedule. Additionally, various intermeshing features can be produced upon the ends of the sheared blocks by simply duplicating the desired pattern into the ends of the respective chambers.